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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/786,177 | 02/23/2004 | David Bogart Dort | VRBIA.P7B | 3793 |

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| EXAMINER |
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TRAN, DALENA

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| ART UNIT | PAPER NUMBER |
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3661

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/786,177 | Applicant(s) DORT, DAVID BOGART | |
| | Examiner Dalena Tran | Art Unit 3661 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-23 are pending.

The prior art submitted on 2/23/04 has not been considered, because all the copy of foreign patent documents, and other prior art non patent literature documents cited have not been received yet. Submission is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13, in the last line, "wherein said non-negative acceleration governor", the meaning is not completed, because does not said what is going on after "wherein said non-negative acceleration governor". Correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12-13, and 17, are rejected under 35 U.S.C. 102(b) as being anticipated by Henson (5,134,393).

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As per claim 12, Henson discloses a traffic control system for use in reducing traffic congestion including: a plurality of non-negative acceleration control units, each of plurality of control units including a reception unit and a transmission unit, wherein a plurality of reception units may be controlled by one of said transmission units (see columns 6-7, lines 13-2), each of plurality of reception units operatively coupled with a vehicle's acceleration system (see column 8, lines 1-17), and wherein at least a portion of non-negative acceleration control units are activated when a speed detection device detects that a vehicle has reached a low threshold speed, wherein reception units are activated by a transmitter at an entrance to a traffic congestion reduction zone (see columns 4-5, lines 42-32).

As per claim 13, Henson discloses a non-negative acceleration governor operatively coupled to a vehicle acceleration capability, wherein non-negative acceleration governor cannot limit the positive acceleration of said vehicle unless the speed of a vehicle reaches a low threshold (see column 8, lines 1-17), and an activation device coupled to said non-negative acceleration governor (see columns 8-9, lines 61-51).

As per claim 17, Henson discloses a receiver operatively coupled to activation device (see column 4, lines 1-42).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-7, 19-20, and 22-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393) in view of Asano et al. (3,835,950).

As per claim 1, Henson discloses a traffic control system for a traffic congestion zone, including: a traffic event sensing system (see column 8, lines 18-36), a traffic spacing system activated when traffic event sensing system detects a first criteria, traffic spacing system including a plurality of vehicle speed regulation devices (see column 3, lines 21-25; and columns 4-5, lines 43-33). Henson do not disclose at least a first of plurality of vehicle speed regulating devices has a lower vehicle speed limit than a second of plurality of vehicle speed regulating devices. However, Asano et al. disclose at least a first of plurality of vehicle speed regulating devices has a lower vehicle speed limit than a second of plurality of vehicle speed regulating devices, first speed regulating device is behind second speed regulating device in traffic congestion zone (see columns 5-6, lines 30-48), and whereby at least two vehicles controlled by 1 first and second vehicle speed regulating devices in congestion zone are spaced apart as they move forward in traffic congestion zone (see columns 1-2, lines 27-25; and columns 13-14, lines 55-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson by combining at least a first of plurality of vehicle speed regulating devices has a lower vehicle speed limit than a second of plurality of vehicle speed regulating devices for controlling separate vehicle running in roadway to regulate speed and following distance of the vehicles.

As per claims 2-3, Henson discloses first criteria is the speed of a vehicle, wherein said speed of a vehicle is less than 3 m/s, and speed of a vehicle is measured over a period of time (see column 8, lines 37-60).

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As per claims 4-5, Henson discloses event detector is located on roadway, and event detector is located in multiple lanes (see column 7, lines 3-15).

As per claims 6-7, Henson discloses traffic congestion zone is divided into at least 3 speed control regions, and each speed control region has an associated one of plurality of vehicle speed regulation devices (see columns 4-5, lines 42-32).

As per claim 19, Henson discloses a method for reducing traffic congestion including the acts of: placing an acceleration limiting reception device in each of a plurality of vehicles (see column 8, lines 1-17), activating at least one of plurality acceleration limiting reception devices in a congestion reduction zone (see columns 8-9, lines 61-51); and transmitting instructions to at least one of plurality of acceleration limiting reception devices in at least one vehicle located in congestion reduction zone (see columns 6-7, lines 13-2). Henson does not disclose transmitted instruction cause the non-negative acceleration of a vehicle to be limited. However, Asano et al. disclose transmitted instruction cause the non-negative acceleration of a vehicle to be limited (see columns 11-12, lines 32-50; and columns 19-20, lines 33-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson by combining transmitted instruction cause the non-negative acceleration of a vehicle to be limited to control the speed and spacing of vehicles.

As per claim 20, Henson discloses activation takes place when a traffic event is detected (see column 8, lines 37-60).

As per claim 22, Henson discloses transmitter is located at the base on an on ramp, such that a vehicle may not enter a highway until instructions are transmitted to acceleration limited reception device (see column 10, lines 1-43).

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As per claim 23, Henson discloses a method for controlling the flow of traffic in a highway merge area including the acts of: placing an acceleration limiting reception device in each of a plurality of vehicles (see columns 4-5, lines 42-32; and column 8, lines 1-17), activating at least one of said plurality acceleration limiting reception devices in a merge congestion zone, wherein merge congestion zone includes at least a stretch of an on-ramp and a portion of a travel lane prior to its connection to merge (see columns 8-9, lines 61-51), transmitting instructions to at least one of plurality of acceleration limiting reception devices in at least one vehicle in travel lane and one merging vehicle located in stretch of on-ramp, located in merge congestion zone, and transmitting instructions to at least one of plurality of acceleration limiting reception devices in at least one vehicle and one merging vehicle located in merge congestion zone (see column 5, lines 33-65). Henson does not disclose transmitted instruction cause the non-negative acceleration of a vehicle to be limited. However, Asano et al. disclose transmitted instruction cause the non-negative acceleration of a vehicle to be limited (see columns 11-12, lines 32-50; and columns 19-20, lines 33-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson by combining transmitted instruction cause the non-negative acceleration of a vehicle to be limited to control the speed and spacing of vehicles.

7. Claim 8, is rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393), and Asano et al. (3,835,950) as applied to claim 1 above, and further in view of Tuttle (6,112,152).

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As per claim 8, Henson, and Asano et al. do not disclose at least one speed regulation device includes at least one transponder. However, Tuttle discloses at least one speed regulation device includes at least one transponder (see columns 5-6, lines 61-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson, and Asano et al. by combining at least one speed regulation device includes at least one transponder for transmitting vehicles speed to control spacing of vehicles.

8. Claim 9, is rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393), and Asano et al. (3,835,950) as applied to claim 1 above, and further in view of Horita et al. (6,657,558).

As per claim 9, Henson, and Asano et al. do not disclose at least one speed regulation device includes at least one broadcast device located along a roadway. However, Horita et al. disclose at least one speed regulation device includes at least one broadcast device located along a roadway (see columns 5-6, lines 36-28; and columns 11-12, lines 50-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson, and Asano et al. by combining at least one speed regulation device includes at least one broadcast device located along a roadway to transmit traffic event information to the vehicle drivers to avoid the congestion.

9. Claims 14-17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393) in view of Andreas et al. (6,094,616).

As per claim 14, Henson does not disclose a distance detection device. However, Andreas et al. disclose a distance detection device in activation unit, distance detection

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device being for detecting a distance between two vehicles (see column 2, lines 27-63; and column 3, lines 26-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson by combining a distance detection device to control spacing between vehicles.

As per claim 15, Andreas et al. disclose activation unit activates non-negative acceleration unit when a threshold distance is detected (see columns 3-4, lines 57-13).

As per claim 16, Andreas et al. disclose low threshold speed is Zero (see column 4, lines 15-56).

As per claim 17, Henson discloses a receiver operatively coupled to activation device (see columns 3-4, lines 39-41).

10. Claim 18, is rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393), and Andreas et al. (6,094,616) as applied to claim 17 above, and further in view of Lees et al. (6,483,443).

As per claim 18, Henson, and Andreas et al. do not disclose receiver is configured to receive EMF signals. However, Lees et al. disclose receiver is configured to receive EMF signals corresponding to a non-negative acceleration limit, said activation device translating said EMF signals and providing them to non-negative acceleration governor (see columns 1-2, lines 60-25; and column 5, lines 48-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson, and Andreas et al. by combining receiver is configured to receive EMF signals for accurately control speed and spacing of vehicles.

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11. Claim 21, is rejected under 35 U.S.C. 103(a) as being unpatentable over Henson (5,134,393), and Asano et al. (3,835,950) as applied to claim 19 above, and further in view of Lichtenberg et al. (6,459,983).

As per claim 21, Henson, and Asano et al. do not disclose deactivating at least one of plurality of acceleration limiting device. However, Lichtenberg et al. disclose deactivating at least one of plurality of acceleration limiting device (see column 3, lines 3-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Henson, and Asano et al. by combining deactivating at least one of plurality of acceleration limiting device to maintain vehicle spacing when the speed and distance has been adjusted to assure vehicle safety.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

. Proctor (3,750,099)

. Woll et al. (5,581,464)

. Jeon (6,356,833)

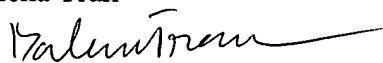
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Dalena Tran

A handwritten signature in black ink, appearing to read 'Dalena Tran', with a long horizontal flourish extending to the right.

May 27, 2005